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STUDIES OF PERUVIAN BIRDS. I

NEW AND OTHER BIRDS FROM PERU, ECUADOR, AND BRAZIL

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In December, 1910, Dr. Frank M. Chapman inaugurated a plan for the preparation of a series of monographs dealing with the origin and distribution of the bird-life of the Andes. This plan already has borne notable fruit in the shape of two volumes by Dr. Chapman on two of the Andean countries. The first of these to appear was 'The Distribution of Bird-Life in Colombia,' issued in 1916 as volume XXXVI of the Bulletin of The American Museum of Natural History, with 739 pages, 41 plates, and 21 text-figures. The next was 'The Distribution of Bird-Life in Ecuador,' published in 1926 as volume LV of the same series, with 797 pages, 30 plates, and 20 text-figures. These comprehensive reports were based upon carefully planned field work by The American Museum of Natural History.

Continuing southward from Ecuador along the chain of the Andes, the next country to be treated is Peru. The work of assembling the requisite collection from this country was begun soon after the plan for the series of monographs was inaugurated and before the first volume was prepared. The foundation of the collection was already laid down through the acquisition in 1901 of about one hundred birds collected at Inca Mine by H. H. Keays. In 1913, R. H. Beck, working the coast of South America on the Brewster-Sanford South American Expedition, spent about eight months on the coast and islands of Peru and also crossed the highlands to Lake Titicaca. His important collections from Peru are incorporated into the series.

When the work in Colombia was well advanced, special collectors were put into both Ecuador and Peru. In 1915, Harry and Casimir Watkins, resident naturalists of long standing in the latter country, commenced field work for The American Museum of Natural History, first sending in a small collection made in the latter part of 1914. In 1916, Dr. Chapman, accompanied by George K. Cherrie, visited the Urubamba Valley in connection with the preparation of a special report on the birds of that restricted region, based on the material collected by

the joint expedition of Yale University and the National Geographic Society, of which Edmund Heller was the field naturalist, and that secured by Dr. Chapman's party. The report on the birds of this region was published in 1921 by Dr. Chapman, as Bulletin 117 of the United States National Museum. In the field, Dr. Chapman was joined by Harry Watkins, who later, in 1917, visited the head of the valley at La Raya and added much material to the excellent series of birds already secured from that interesting region. A series of duplicates of Heller's collection was obtained by the Museum and complemented the representation already at hand. Watkins remained in the employ of the American Museum until 1926, visiting various parts of the country, carefully selected for their bearing on the problems of distribution and life zones; and the excellent skins now at hand, sent in by him, testify to his energy and skill as a collector.

Meanwhile the coast and islands of Peru were being explored in 1919 and 1920 by Robert Cushman Murphy, under the joint auspices of the American Museum, the Brooklyn Museum, and the American Geographical Society. The birds obtained in the course of this work were largely acquired by the American Museum. Again in 1924 and 1925, Dr. Murphy revisited Peru for this museum and completed the survey of the northern coast and islands in the neighborhood of the Gulf of Guayaquil.

When the work in Ecuador was completed in 1926, the experienced native collectors, Carlos Olalla and his sons, were moved from Ecuador into northeastern Peru, and thence southward to the mouth of the Urubamba River, and until well into 1928 they continued to send extensive collections to the museum from that interesting region. G. H. H. Tate, of the American Museum staff, extended his investigations in other parts of South America to include a visit to Arequipa, Peru, in 1926, and the number of bird skins in the Peruvian collection was increased further from that source.

A more complete history of these collections and collectors will be given in the final Peruvian report, and it is unnecessary to go into greater detail here. There has been a representative of the American Museum continuously in the field in Peru from at least 1915 to 1928, and the result of all such activities has been the assemblage of some 17,000 bird-skins from many parts of the country, a collection unequalled in the history of Peruvian ornithology.

Portions of this collection have been examined by Dr. Chapman during the preparation of the report on the bird-life of Ecuador, and

numerous references to Peruvian specimens and species, given in various preliminary papers and in the final volume, not only served to indicate, in some measure, the progress of the field work in Peru, but also to lay a foundation on the network of interrelations between the birds of Peru and those of its northern neighbor.

The present author has undertaken a comprehensive study of the bird-life of Peru for the purpose of preparing the complete volume on its distribution. Necessarily this project requires much preliminary taxonomic work to determine the identity of the Peruvian forms and their relationship to the forms of other Neotropical countries. The amount of material to be examined is considerable and the presentation of the taxonomic problems in full detail in the final volume is open to various objections. Among these are, first, the question of space; secondly, the fact that there is a certain proportion of new discoveries and details which relate to non-Peruvian forms, and whose discussion in a Peruvian report may be somewhat out of place; and finally, the fact that the preliminary presentation of these problems may result in opening discussions that will lead to additional information before the results must be summarized.

Consequently, it has been considered advisable to open a series of studies dealing particularly with Peruvian birds but containing accounts also of such new forms and facts as appear in the course of the work, whether from Peru or from other countries related to it in respect to the questions involved. The first of these papers is presented herewith.

Many thanks are due to Mr. Todd of the Carnegie Museum, Pittsburgh, for the loan of certain comparative material; also to Dr. C. E. Hellmayr for notes on certain European material not available to me. To Dr. A. Laubmann of Munich, I am greatly indebted for a careful comparison made between the type of *Malacoptila rufa* (Spix) and certain specimens sent to him for this examination.

Names of colors when capitalized indicate direct comparison with Ridgway's 'Color Standards and Color Nomenclature.'

Malacoptila rufa brunnescens, new subspecies

TYPE from Caxiricatuba, Rio Tapajóz (right bank), Brazil, No. 248,846, American Museum of Natural History. Adult male collected May 13, 1931, by A. M. Olalla.

DIAGNOSIS.—Similar to *M. r. rufa* from the upper Amazon, northeastern Peru, and southeastern Ecuador, but head above much darker gray (blacker at tips of feathers) and much more strongly streaked with white shaft-lines; lores averaging paler rufescent, collar on hind neck averaging lighter rufous and more strongly con-

trasted with the back which is indistctly browner and less rufous; upper tail-coverts and tail less rufescent; white pectoral area bordered below by dusky margins which are often distinctly blacker and more sharply defined than in *rufus;* pale, pendant tuft at base of lower mandible more buffy, less whitish. Under wing-coverts paler, less ochraceous; males with inner margins of remiges whitish instead of buffy. Entire under parts (in typical birds), except the white pectoral patch, strongly tinged with grayish brown, less rufescent.

RANGE.—Amazonian valley on the south bank of the river between the right bank of the Rio Madeira (Borba) at least as far as the right bank of the Tapajóz. Whether or not the birds from the right bank of the upper Madeira (Jamarysinho, etc.) and the region from the Xingu to Pará are the same cannot be decided without additional material. Birds from between the Madeira and Purús rivers are intermediate between *brunnescens* and *rufa* but closer to *rufa;* those from between the Madeira and Tapajóz are also intermediate but closer to *brunnescens.*

DESCRIPTION OF TYPE.—Large loral patch extending more narrowly across the forehead bright Tawny x Ochraceous-Tawny (pale at base of feathers); remainder of top of head and the auriculars Dark Mouse Gray, blacker at tips, with relatively broad, conspicuous shaft lines of white; malar region chestnut with pale shaft streaks, the rufous color continued unstreaked around the hind neck in the form of a well-defined collar somewhat paler than the malar region (Sanford's Brown x Burnt Sienna); from the base of the lower mandible a dependent tuft of pointed, stiffened feathers largely creamy buff; a more or less well-defined dusky stripe between this tuft and the rufous of the malar region; back dark Brussels Brown, well defined from the rufous collar; upper tail-coverts somewhat tawny only at tips. Chin pale buff with the feathers bristly, decomposed; upper throat Buffy Brown x Olive Brown, the feathers adjacent to the chin somewhat stiffened and decomposed and with pale shafts; those farther posterior more normal in structure and basally pure white; upper breast abruptly silky white with the lower feathers (and a few of the upper ones) sharply and conspicuously tipped with dusky, making a sharply-defined lower border to the white patch; lower breast Buffy Brown x Saccardo's Umber, somewhat more rufous laterally where it merges into the rufous malar stripe and the nuchal band; upper feathers of this area with a dusky subterminal band and white base which merge with the white breast patch and its dark horizontal bar; flanks buffy drab; belly and under tail-coverts Light Drab x Avellaneous, whitish subterminally. Wings blackish brown with exposed surface of upper coverts and tertials matching the back; outer margins of primaries and secondaries slightly paler than the back. Bend of wing and under wing-coverts Pinkish Buff; inner margin of quills Tilleul Buff. Rectrices above Sepia, faintly paler at tips; below paler with shafts conspicuously ochraceous. Maxilla and tip of mandible (in dried skins) blackish; base of mandible pale; feet pale brown. Wing, 91 mm.; tail, 67½; culmen from base, 30; exposed culmen, 24; tarsus, 18½.

REMARKS.—Sexes alike.

There is noticeable variation in certain details of coloration but none of the series can be confused with typical *rufa.* The brownish coloration of the back and the strongly streaked head are definitive.

A young bird from Serra de Parintins, collected November 12, 1930, and another from Tauarý, collected April 11, 1931, are much like the adults in general color and pattern except that the top of the head is buffy brown without any streaks (though the auriculars are streaked), the white pectoral patch is not fully developed and has the dusky line across its lower border only faintly suggested, and all colors are correspondingly duller except where adult plumage has commenced to appear.

Birds from between the Tapajóz and the Madeira are variously intermediate. Those from the immediate left bank of the Tapajóz are very like the right-bank specimens though inclined to be a little less grayish and more brightly rufescent below. Skins from a little farther west along the Amazon, opposite Obidos, are even brighter, while those from the right bank of the Madeira match *rufa* in ventral coloration except that the dark band across the lower portion of the white pectoral patch is quite blackish. In fact these latter skins largely combine the upper surface of *brunnescens* with the lower surface of *rufa* in such a regular way that it is a question whether the combination is not deserving of a distinctive name. However, one skin from Borba is inseparable from the typical series and, even without this complication, the range which would have to be assigned to such a form would be too restricted to be of much service in demonstrating the variations of the species as a whole. It is probably best to consider these as what they unquestionably are—exact intermediates between *rufa* and *brunnescens*.

As a matter of fact, the Borba and Villa Bella Imperatríz skins were recognized as being perfectly distinct from *rufa* and their description was in galley proofs when the Tapajóz material came to hand and demonstrated that additional characters were shown constantly by birds from the east bank of that river. Consequently the manuscript has been revised to show the later observations.

West of the Rio Madeira the tendency is still more in the direction of *rufa*, so much so that the birds from that side of the river must be referred to *rufa* though they are not typical. Specimens from Caviana and Rosarinho, between the Madeira and the Purús, show a variable tone of rufous and brown on the back, though the top of the head appears to be lightly streaked as in birds from Peru. The dark band between the white pectoral patch and the ochraceous-brown lower breast is variously sharply blackish as in *brunnescens* or paler and grayish as in *rufa*. The inner margins of the remiges of the males are as in *brunnescens*, being more whitish than ochraceous. On the whole, these birds

seem to be closer to typical *rufa* and must be referred there for the present.

Hellmayr (1907, Novit. Zool., XIV, p. 400), notes that a female from Humaythá (left bank of the Madeira) has a deeper ferruginous frontal band and a more rufescent back than a specimen of the same sex from Pará. This is in accord with the general conclusions reached from the material before me which indicate the range of typical *rufa* as reaching from Peru to the left bank of the Madeira.

Although the existence of two forms of this species was discovered nearly a year ago when comparison was first made between specimens from Peru and the Rio Madeira, it was uncertain which form was typical *rufa* and which the new one. The Peruvian specimens agreed rather closely with Spix's plate and description, but Hellmayr, writing about the birds of the Rio Madeira, reported apparent agreement between Rio Madeira specimens and the type of *rufa*. Consequently it was necessary to submit specimens of both forms to Dr. A. Laubmann of Munich, with a request for a direct comparison with Spix's bird. This Dr. Laubmann kindly performed, reporting that the Peruvian bird agreed very well with the original while a specimen from Igaripé Auará, near Borba, represented the separable form.

Dr. Laubmann's report that the specimen sent him from Sarayacu, Peru, agrees closely with Spix's type as contrasted with a specimen from Igaripé Auara, near Borba, which represents the region from the lower Madeira to the Tapajóz, makes it evident that the bird Spix described came from the Rio Amazon somewhere above the mouth of the Madeira, probably west of the Purús, Specimens kindly loaned to me by Mr. Todd of the Carnegie Museum, Pittsburgh, show the characters of the typical form to be well marked in an example from São Paulo de Olivença, and as this was one of the localities visited by Spix, I hereby suggest it as restricted type locality of *M. r. rufa*.

Dr. Laubmann also wrote that specimens in Munich from Maruins and Alliança (to the right of the upper Madeira) and from Pará show the brown back of the new form but the sparsely streaked head of typical *rufa*. This throws some doubts on the probable distribution of *brunnescens*, which may be restricted, on the Madeira River, to the lower part of the right bank if *rufa* crosses the river in the upper portion to Alliança; more material from this latter region must be examined before this point can be determined. Snethlage (1914, Bol. Mus. Goeldi, VIII, p. 238), records the species from numerous localities between the east bank of the Tapajóz and the Pará region, and these may represent more

than one form, judging by Dr. Laubmann's comment on his Pará specimen. This also will require the study of additional material. Snethlage's record from Cachoeira, Rio Purús, must belong to typical *rufa*.

SPECIMENS EXAMINED

M. r. rufa.—PERU: Sarayacu, Río Ucayali, 3♂, 1♀; Orosa, Río Amazon, 4 ♀. ECUADOR: mouth of the Río Curaray, 1♂, 1♀. BRAZIL: Rosarinho, Rio Madeira (west bank), 1♂; Lago Sampaio, Rio Madeira (west bank), 1♂, 2♀; São Paulo de Olivença, 1♀[1]; Nova Olinda, Rio Purús, 1♂[1]; Arimã, Rio Purús, 1♂[1]; Caviana, 1♂[1].

M. r. brunnescens.—BRAZIL: Villa Bella Imperatríz, Lago Andirá, Rio Amazon, (south bank), 4♂, 5♀, 2 indet. sex; Villa Bella Imperatríz, Serra de Parintins, 1 juv. indet. sex; Igaripé Auará, Rio Madeira (east bank), 2♂, 1♀; Borba, 2♂; Caxiricatuba, Rio Tapajóz (right bank), 3♂ (incl. type), 2♀; Piquiatuba, 1♂; Tauarý, 1♀, 1 (?); Igaripé Brabo, Rio Tapajóz (left bank), 2♂, 2♀.

Conopophaga aurita australis Todd

Conopophaga aurita australis TODD, 1927, Proc. Biol. Soc. Wash., XL, p. 150, Dec. 2—Nova Olinda, Rio Purús, Brazil; ♂; Carnegie Museum.

Study of a series of fourteen specimens of this form has yielded somewhat unsatisfactory results. There is a great amount of variation in both sexes which is opposed to the relative uniformity exhibited by the other subspecies. The rufescence of the breast of the males is darkest in a specimen from Teffé, palest in one from São Paulo de Olivença, moderately pale in a Peruvian skin and another one from Teffé, and again darker in a specimen from Hyutanahán, Rio Purús. The top of the head is likewise variable in depth of rufescence. Two more males from Hyutanahán are quite different from the other male from that locality, having the black of the throat carried down over the upper breast as in *snethlageae*, except that the lower feathers are broadly tipped with the rufous of the lower breast which tends to conceal the black. There is also a slight reduction in the prominence of the dusky lunules on the mantle, also showing approach toward *snethlageae*. The belly, however, is paler than in either form.

The Peruvian male, at the western end of the range, has the rufescence of the breast somewhat more ochraceous in tone than the Brazilian birds, but the difference is not great in view of the variability shown by the latter.

The females are also puzzling. Hyutanahán and São Paulo females are variable within certain limits, but a bird of the same sex from Caviana has the breast very much paler than the others, Ochraceous-Tawny on

[1]Specimens in Carnegie Museum, Pittsburgh.

the sides and almost Cinnamon-Buff on the lower part, with the belly whitish; the back is a little more olivaceous than it is in the other Brazilian females. The Peruvian female, however, is distinctly more olivaceous above and on the wings than even the Caviana specimen, though the color of the breast can be matched in Hyutanahán and São Paulo skins. The pileum is distinctly paler and duller than in any other example referred to *australis*, and therein may lie a recognizable difference.

It is possible that the Caviana bird represents a white-bellied race to which the two aberrant Hyutanahán males show affinity, but I have not seen enough material to show this conclusively. It is also possible that the Peruvian birds can be separated as a relatively olivaceous form in which the female has a paler and duller crown, but until more material is available to show the constancy of these characters, in view of the variability shown elsewhere, I prefer to assign the Peruvian specimens to *australis* to which they bear much closer resemblance than to any other known subspecies.

SPECIMENS EXAMINED.—See under *C. a. inexpectata*.

Conopophaga aurita inexpectata, new subspecies

TYPE from Tabocal, Rio Negro, Brazil. No. 301,500, American Museum of Natural History. Adult male collected September 11, 1929, by the Olalla brothers.

DIAGNOSIS.—Nearest to *C. a. occidentalis* from eastern Ecuador, but upper parts rather brighter in coloration; top of head brighter rufescent (especially marked in the females), and back more ochraceous olive, less greenish olive. Compared to *C. a. aurita* from the Guianas and the north bank of the Amazon, east of the Rio Negro, the under parts are more buffy and with less white, and the top of the head is darker.

RANGE.—Tropical zone of Upper Amazonia, north of the Amazon, from the right bank of the Rio Negro west to the Putumayo and north at least to the Uaupés and the Caquetá (eastern Colombia).

DESCRIPTION OF TYPE.—Forehead, broad circumocular region, lores, auriculars, malar region, chin, and throat to anterior border of breast, black; a silvery white stripe of elongated feathers above auriculars from upper posterior margin of circumocular space to nape; top of head from behind forehead to nape bright Auburn; back between Dresden Brown and Saccardo's Umber; feathers of mid-back with well-marked blackish terminal borders preceded by an indistinct submarginal band of Tawny-Olive; blackish borders less conspicuous on upper mantle, rump, and upper tail-coverts. Breast Sanford's Brown x Cinnamon-Rufous, passing rather abruptly into light Cinnamon-Buff on the upper flanks and under tail-coverts, more olivaceous near thighs, which are Mummy Brown, and Pale Pinkish Buff on the mid-belly. Most of the upper wing-coverts Dresden Brown with a narrow dusky terminal margin and a pronounced submarginal lunule of bright Hazel or Amber Brown; tertials similar. Primary-coverts dull blackish with grayish olive outer margins. Alula with inner web dull blackish, inner half of outer web grayish olive, and outer web broadly

white almost to tip; carpal edge of wing whitish; primaries and secondaries dusky with outer margins Dresden Brown. Under wing-coverts largely white with a buffy tinge at tip, but with a large patch of dusky near carpal edge of wing at base of primaries, surrounded by white; axillaries like flanks; inner margin of quills pale (Tilleul Buff). Tail sepia, outer margins somewhat brighter. Bill (dried skin) black; feet dull brownish. Wing, 67 mm.; tail, 28; exposed culmen, 12¼; culmen from base, 17¾; tarsus, 28.

REMARKS.—Females similar to males above except that forehead, lores, and superciliary line to the upper posterior border of the eye are white (anterior portions with hair-like tips black); throat pale and more ochraceous than the breast, chin even paler and inclined to whitish; anterior malar region dull, pale grayish-olive passing on the auriculars into a color intermediate between that of the breast and that of the crown.

SPECIMENS EXAMINED

C. a. aurita.—BRITISH GUIANA: Great Falls, Demarara River, 1 ♂; Supernaam, 1 ♀; Essequibo River 1 ♂; Rockstone, Essequibo River, 1 ♂. BRAZIL: Manáos, 1 ♂; Faró, Rio Jamundá, 1 ♂, 1 ♀.

C. a. occidentalis.—ECUADOR: lower Río Suno, 1 ♂; Río Suno, above Avila, 3 ♂, 2 ♀; below San José, 1 ♂, 1 ♀; mouth of the Río Curaray, 2 ♂, 1 ♀.

C. a. australis.—BRAZIL: Hyutanahán, 3 ♂, 3 ♀[1]; São Paulo de Olivença, 2 ♂, 1 ♀[1]; Santo Isidoro, Tefé, 1 ♂; ? Caviana, 1 ♀. PERU: mouth of Río Urubamba, 1 ♂; Lagarto, 1 ♀.

C. a. snethlageae.—BRAZIL: Mirituba, 2 ♂[1]; Villa Braga, 2 ♂, 4 ♂[1]; Aramanaý, Rio Tapajóz (right bank), 1 ♂; Caxiricatuba, 1 ♀, 1(?); Piquiatuba, 1 ♂, 2 ♀; Tauarý 1 ♂, 1 ♀.

C. a. inexpectata.—BRAZIL: Tabocal, Rio Negro, 1 ♂ (type), 2 ♀; Tatú, Rio Negro, 1 ♂; Tahuapunto, Rio Uaupés, 1 ♂, 1 ♀; Tonantins, 1 ♂[1]; Manacapurú, 3 ♂, 2 ♀.[1] COLOMBIA: Florencia, 1 ♂; La Murelia, 1 ♂.

Neoctantes niger (Pelzeln)

Xenops niger PELZELN, 1859, Sitzungsb. Akad. Wiss. Wien, Math.-naturw., Kl., XXXIV, p. 111—Marabitanas, Rio Negro, Brazil; Vienna Museum.

A single female from Puerto Indiana, at the mouth of the Napo, constitutes the first record of this bird from Peru. It agrees well with two females from Eucador (one from the Río Suno and one from the mouth of the Río Curaray, both affluents of the Río Napo), except that it is a trifle paler on the breast. Since none of the series is topotypical, no comparative notes can be given with typical birds.

SPECIMENS EXAMINED

N. niger.—ECUADOR: mouth of Río Curaray, 1 ♂, 1 ♀; Río Suno, above Avilà, 2 ♂, 1 ♀; lower Río Suno, 1 ♂. PERU: Puerto Indiana, 1 ♀.

[1]Specimens in Carnegie Museum, Pittsburgh.

Dichrozona cincta (Pelzeln)

Cyphorhinus (*Microcerculus*) *cinctus* Pelzeln, 1868, 'Orn. Bras.,' I, pp. 47, 65—Borba, ♀; St. Joaquim, ♂; type locality desig. S. Joaquim (junction of Rio Uaupés and Rio Negro), Hellmayr, 1924; ♂; Vienna Museum.

A female of this rare and interesting species is at hand from Santa Rosa, upper Ucayali, Peru, the first specimen to be recorded from this country. For comparison there are seventeen additional skins from Ecuador, Colombia, extreme northwestern Brazil, the south bank of the Amazon opposite Obydos, and the east bank of the Rio Tapajóz.

The study of this material has been very instructive but leaves the affinity of the Peruvian bird an open question. Specimens from the upper Rio Negro and the Rio Uaupés (topotypical) are characterized by their rufescent coloration of the upper parts and the relatively small spotting of the breast. Colombian examples are very similar to the topotypes, differing only by slightly larger spots on the breast, but they are equally rufescent above.

On the other hand, three skins from Villa Bella Imperatríz, south of the Amazon, and four from the Tapajóz are noticeably paler and more ochraceous, less rufous, on the back, and the top of the head, though more rufous than the back, is lighter than in typical *cincta*. These birds are entitled to the name *D. c. zononota* Ridgway.

Ecuadorian specimens, as pointed out by Hellmayr (1903, Journ. Orn., LI, p. 536), are darker than typical *cincta*, but whereas Hellmayr believed this character to be due to the immaturity of the specimens he examined, a fully adult male from the Río Suno shows the same feature. Not only is the rufescent color of the head and back darkened and tinged with olive, but the feathers of the mantle have quite noticeable dusky tips. The under side is marked by relatively heavier black spots which even extend down the upper flanks (in somewhat reduced size); the lower flanks are darker and grayer, less ochraceous. Except for the extension of the black spots on the upper flanks, an adult female and a nearly adult male show the same characters. These birds are recognizably distinct from *cincta* and *zononota* and should be called *D. c. stellata* (Sclater and Salvin).

The Peruvian bird is decidedly nearest to typical *cincta* and without more material it would be impossible to point out any decided differences from that form since it seems to have no definite features that can not be matched in one or another of the *cincta* females. The spotting on the breast is a little heavier than in the Rio Uaupés female but like the La Murelia female which it matches best also in the color in the mantle,

though it is a trifle less rufescent; it is, however, much more rufescent than either *stellata* or *zononota*.

With the range of this bird cut off from that of *cincta* by the region which *stellata* occupies, it seems very probable that there is a distinct but unrecognized form inhabiting eastern Peru, but it will require additional material to determine the point satisfactorily. Possibly Bolivian and west-Brazilian (Rio Juruá and Rio Purús) specimens belong to this same form. Birds have been recorded from these regions but no distinguishing characters have been given for them. They should at least show if *zononota* tends to become more rufescent as it extends westward from the Tapajóz and Madeira rivers.

SPECIMENS EXAMINED

D. c. cincta.—BRAZIL: Tatú, mouth of Rio Uaupés, 1 ♂; Tahuapunto, Rio Uaupés, 1 ♀; Yucabi, Rio Negro, 1 ♂; Monte Curycuryari, Rio Negro, 1 ♀. COLOMBIA: Florencia, Caquetá, 1 ♂, 1 ♀; La Murelia, 1 ♀.

D. c. zononota.—BRAZIL: Villa Bella Imperatríz, Lago Andirá (south bank of Amazon), 2 ♂, 1 ♀; Piquiatuba Rio Tapajóz, 2 ♂; Caxiriçatuba, Rio Tapajóz. 1 ♂, 1 ♀.

D. c. stellata.—ECUADOR: lower Río Suno, 1 ♂, 1 ♀; below San José de Sumaco, 1 ♂.

D. c. subspecies.—PERU: Santa Rosa, upper Ucayali, 1 ♀.

Cercomacra serva hypomelaena Sclater

Cercomacra hypomelaena SCLATER, 1890, 'Cat. B. Brit. Mus.,' XV, p. 268—Cosnipata, S. E. Peru.

A careful study of 15 males (11 adult) and 3 females from Peru and Bolivia, and of 9 males (7 adult) and 5 females from Ecuador, has convinced me that Sclater's *hypomelaena* is entitled to recognition. The general characteristics of the Peruvian subspecies include a somewhat grayer, less blackish upper surface in the male sex, with the black of the under parts extending a lesser distance posteriorly, being followed by a somewhat paler tone of gray on flanks and belly. Females average a little brighter (less grayish) olive above and have the forehead more distinctly tinged with ochraceous in the middle. The wing and bill appear to average a trifle shorter. Wing, ♂, 62–67.5 mm. (av. 64.9); ♀, 60–64.5 (av. 61.2); culmen from base, ♂, 18–19.5 (av. 19); ♀, 17.5–18 (av. 17.7). In *serva* the measurements are: wing, ♂, 64.5–70 (av. 66.6); ♀, 60–64 (av. 61.6); culmen from base, ♂, 17.5–20.5 (av. 19.2); ♀, 17.5–19 (av. 18.7).

So far as the present series shows, there is no overlapping of characters in the males. The palest *serva* is certainly very close to the darkest

hypomelaena, but if the breast is equally black in the two examples, the flanks and the upper surface are distinctive. In series, the differences are quite pronounced.

In the female sex there is not the same constant demarcation, but the characters mentioned, especially the color of the forehead, may serve to differentiate the two forms in small series. The extremes are noticeably distinct.

Hellmayr [1920, Arch. Naturg., LXXXV, A, (10), p. 104] compares three topotypical males of *serva* from the Napo region, Ecuador, with five males from the Carabaya district of Peru without finding recognizable differences to validate *hypomelaena*, but the details of his observations distinctly agree with the characterization I have given above. One Napo male and one from San Gaban, Carabaya, were found to be equally dark; two other Napo males were distinctly darker, and the rest of the Carabaya males were paler. Measurements also showed longer wing and bill in Ecuadorian specimens.

A male in Field Museum of Natural History, referred by me to *serva* (1930, Field Mus. Nat. Hist. Publ., Zool. Ser., XVII, p. 331), was noted as having the lower breast more grayish than the sooty black of the upper breast, a characterization which agrees with *hypomelaena* although no direct comparison has been made with the present series.

In the light of this evidence I see no reason to refuse recognition to *hypomelaena* as a valid race. Whether the birds recorded from Pebas belong here or to typical *serva* remains to be determined. Probably they belong to *serva*.

A young male from the Urubamba Valley, recorded by Chapman as *nigrescens approximans* and transferred by Hellmayr to *serva*, appears to belong best in the *nigrescens* group, though it is in abnormal plumage and can not be matched in either series. Curiously, *serva* was not obtained on the right bank of the upper Ucayali nor was *C. nigrescens fuscicauda* taken on the left bank, though both were secured at Orosa on the Amazon below the mouth of the Ucayali.

Specimens Examined

C. s. serva.—Ecuador: Río Suno above Avila, 4♂, 1♀; lower Río Suno, 2♂, 2♀; below San José de Sumaco, 3♂, 1♀; mouth of Río Curaray, 4♂, 1♀.

C. s. hypomelaena.—Peru: Rio Tavara, 5♂, 2♀; La Pampa, 4♂; Astillero, 1♂; Santa Rosa, upper Ucayali, 3♂, 1♀; Orosa, Río Amazon (south bank), 1♂; Puerto Bermúdez, 1♂, 1♀.[1] Bolivia: Reyes, 1♂.

[1]Specimens in Field Museum of Natural History, Chicago.

Cercomacra nigrescens fuscicauda, new subspecies

TYPE from Lagarto, upper Rio Ucayali, Peru. No. 239,140, American Museum of Natural History. Adult female collected March 25, 1928, by the Olalla brothers.

DIAGNOSIS.—Closest to typical *C. n. nigrescens*. Males slightly lighter in color but averaging darker than *C. n. approximans*. Females readily distinguishable from both forms mentioned by having the forehead, lores, and superciliary region noticeably less strongly rufescent but the crown and occiput more tawny, less contrasted with the forehead. Back brighter than in *nigrescens* but browner and darker, less olivaceous, than in *approximans;* under parts possibly averaging brighter; concealed white patch on mantle smaller; tail distinctly darker (blacker) and less broadly margined with olivaceous than in *approximans*, about as in *nigrescens*.

RANGE.—Eastern Peru, mainly in the Ucayali Valley, but apparently crossing the Amazon below Iquitos to the mouth of the Napo and possibly to Pebas; extending southeastward through the Urubamba Valley and reaching northwestern Bolivia.

DESCRIPTION OF TYPE.—Top of head bright Dresden Brown x Antique Brown; forehead, lores, and superciliary region somewhat brighter, suffused with Mars Yellow x Amber Brown (not as strongly bright rufescent as in *approximans*); mantle a trifle more olivaceous than Dresden Brown with a small concealed patch of silky white on the lower portion; rump Brownish Olive. Sides of face Mars Yellow x Amber Brown; auriculars with a trace of olive at the tips; chin and throat a little lighter than the sides of the face; breast, sides and middle of belly like the malar region; flanks like the rump; under tail-coverts a little more buffy. Remiges light Clove Brown, margined exteriorly with Saccardo's Umber; upper wing-coverts more sooty, with light Dresden Brown tips; bend of wing and under wing-coverts brighter, like the throat; axillars a little paler; inner margins of remiges whitish except distally. Tail blackish; base of lateral margins above somewhat olivaceous like the upper tail-coverts. Wing, 64 mm.; tail, 57; exposed culmen, 15; culmen from base, 20; tarsus, 23.

REMARKS.—Males are Dark Neutral Gray, rather blacker on the mantle; the concealed patch of white on the dorsum is usually small as is the white patch on the shoulder.

There is a faint "bluish" bloom on the adult males except one from Orosa which is duller and more sooty. This bird greatly resembles *C. serva hypomelaena* in various ways but it is not quite black enough and has too large a bill. A young male and a female from the same locality unquestionably belong to the present species. All three Orosa birds have unusually heavy bills which are not matched in any of the series except possibly in a young male from Puerto Indiana at the mouth of the Napo. This last-named bird is referred here because of its similarity to the Orosa male in the size of bill and color of the adult feathers which have appeared, as well as of the immature feathers not yet lost.

Bolivian examples seem to be referable to this new form rather than to *C. n. approximans* (from Matto Grosso). An adult male from Mapiri

is more or less intermediate, but the female and a young male from Todos Santos have the characters of *fuscicauda*.

The similarity of this subspecies to typical *nigrescens* rather than to its nearest geographical affinities is curious. As a matter of fact, the known distribution of the entire species seems to be distinctly interrupted and the gaps filled by the presence of the very similar *tyrannina* group, with no apparent conflict. Although both *tyrannina* and *nigrescens* are at hand from Faró, it appears from remarks by Snethlage (1913, Journ. Orn., LXI, p. 529) that they do not occur precisely together, *approximans* inhabiting the "varzea" or periodically inundated area, and *tyrannina* the drier forests and clearings. It is thus possible that these two groups ought to be united, but there are certain more or less well-defined characteristics which separate them in spite of apparent resemblances. At any rate, I am not prepared to place them in the same species. As represented at Faró, the groups are recognizably distinct in both sexes.

The Faró specimens, listed below under *C. n. approximans*, are somewhat equivocal subspecifically. While they unquestionably belong to the *nigrescens* group, two of the males could be referred to typical *nigrescens* as readily as to *approximans*, but a third male agrees best with *approximans* as does a single female.

SPECIMENS EXAMINED

C. n. nigrescens.—FRENCH GUIANA: Approuague, 2♂, 2♀; Paramaribo, 2♂.

C. n. approximans.—BRAZIL: Boim, Rio Tapajóz, 1♂, 1♀; Borba, 7♂, 5♀; Igaripé Auará, Rio Madeira, 2♂, 2♀; Villa Bella Imperatríz, south bank of Amazon, 3♂, 3♀. Serra de Parintins, 1♂, 1♀; Boca de Rio Andirá, 1♂, 1♀; Santa Clara, 6♂, 10♀. Faró, north bank of Amazon, 3♂, 1♀; Siete de Septembre, Matto Grosso, 1♀.

C. n. fuscicauda.—PERU: Lagarto, upper Ucayali, 5♂, 7♀ (incl. type); mouth of Río Urubamba, 1♂; San Fernando, Río San Miguel, 1♂; Orosa, 2♂, 1♀; Puerto Indiana, north bank of Río Amazon, 1♂. BOLIVIA: Mapiri, 1♂; Todos Santos, 1♂; mouth of Río San Antonio, Río Espirito Santo, 1♀.

C. n. notata.—PERU: Tulumayo, Junín, 2♂, 3♀ (incl. type); Uschco, 1♂, 2♀; Vista Alegre, Río Chinchao, 2♂, 3♀[1]; Poco Tambo, near Rioja, 1♀[1]; Chinchao, 1♀[1]; La Merced, 1♂, 1♀.[1]

C. n. aequatorialis.—ECUADOR: lower Sumaco, 1♂, 1♀ (incl. type); Chaco, lower Oyacachi, 5♂, 5♀; Guayaba, 1♂, 1♀; Sabanilla, 1♂; Macas region, 1♂.

Cercomacra nigrescens notata, new subspecies

TYPE from Tulumayo, Junín, Peru. No. 169,713, American Museum of Natural History. Adult female collected May 26, 1921, by H. Watkins.

DIAGNOSIS.—Females distinguishable from the other subspecies of *nigrescens* except *aequatorialis* by the decidedly paler tail; from *aequatorialis*, distinguishable

[1]Specimens in Field Museum of Natural History.

by characters given under that form. Males not clearly distinct from those of the other forms but averaging paler below than *fuscicauda;* with certain average differences from *aequatorialis* as given under that subspecies.

RANGE.—Central valleys of Peru from Chanchamayo and Junín to the Río Huallaga and its tributaries.

DESCRIPTION OF TYPE.—Forehead, lores and a superciliary stripe bright Mars Yellow x Amber Brown; crown and occiput dark Saccardo's Olive; mantle light Brownish Olive; rump and upper tail-coverts a little paler and tinged with buffy; a small, concealed patch of white on the lower mantle; auriculars like the lores but with a slightly brownish area posteriorly. Under parts Mars Yellow x Amber Brown; lower flanks Dresden Brown; under tail-coverts a little paler and duller than the belly. Remiges Hair Brown x Chaetura Drab with exterior margins light Dresden Brown, paler at base of outer two pairs; upper wing-coverts darker than the remiges, with external and terminal margins bright Sudan Brown; outer margin of alula paler, more ochraceous, and under wing-coverts and axillars similar; inner margins of remiges pale buffy. Tail Olive Brown with narrow external margins of brighter olive. Maxilla black; mandible whitish; feet slaty black (in dried skin). Wing, 64 mm.; tail, 62; exposed culmen, 16; culmen from base, 20; tarsus, 24½.

REMARKS.—Males below are Deep Neutral Gray; above nearly Dark Neutral Gray, with mantle rather blacker and concealed white patch well developed; under wing-coverts gray with little or no white at the base of the primaries; inner margins of remiges pale but not exactly whitish; upper wing-coverts with not very conspicuous white tips, sometimes lacking on greater series. One Uschco[1] female and one (in Field Museum) from Poco Tambo show an approach toward *aequatorialis.*

SPECIMENS EXAMINED.—See under *C. n. fuscicauda.*

Cercomacra nigrescens aequatorialis, new subspecies

TYPE from the lower Sumaco, eastern Ecuador. No. 184,517, American Museum of Natural History. Adult female collected January 9, 1926, by the Olalla brothers.

DIAGNOSIS.—Nearest to *C. n. notata* with which the females agree in having the tail light brownish rather than fuscous, but from which they differ in the more rufescent, less olivaceous upper parts; back distinctly brighter than in *fuscicauda;* forehead about as in *notata* but crown and occiput more rufescent. Males possibly a trifle darker than those of *notata;* upper wing-coverts with more white; under wing-coverts with a larger extent of white at the base of the quills.

RANGE.—Eastern Ecuador.

DESCRIPTION OF TYPE.—Forehead bright Amber Brown (x Xanthine Orange), lores and a superciliary stripe a little brighter; mantle Brussels Brown x Dresden Brown; rump and upper tail-coverts a little brighter and more tawny; auriculars like the forehead with a brownish tinge at the tips. Under parts about like the lores;

[1] I am not satisfied with this spelling which does not seem to parallel that of any other Peruvian locality. Possibly it should be "Uchco" or "Ushco." The place is situated on the road from Chachapoyas to Moyobamba, about seven miles below Almirante, and was visited by Harry Watkins, whose spelling of the name is given herewith.

flanks dark Dresden Brown. Remiges Hair Brown x Chaetura Drab, with exterior margins light Cinnamon Brown; upper wing-coverts somewhat darker than the remiges, with margins and tips bright Sudan Brown; under wing-coverts Ochraceous-Orange x Ochraceous-Tawny; inner margins of remiges pale whitish buff. Tail dark Olive Brown with brighter margins at base. Maxilla black; mandible whitish; feet dark slaty brown (in dried skins). Wing, 67 mm.; tail, 64; exposed culmen, 15½; culmen from base, 19½; tarsus, 24.

REMARKS.—Males above are Dark to Dusky Neutral Gray with a (usually large) concealed white patch on the mantle; rump and upper tail-coverts somewhat paler than the back. Under parts Deep Neutral Gray; crissum sometimes tinged with olivaceous. Concealed white patch on shoulder large; upper wing-coverts with broad white tips; under wing-coverts with a distinct white patch at the base of the primaries (a male from Sabanilla with most of the under wing-coverts white); inner margins of remiges white or whitish; retrices with narrow but distinct white tips. Bill black; feet dull black.

As mentioned under *C. n. notata*, a female from Uschco and one from Poco Tambo, Peru, show an approach toward *aequatorialis*, being somewhat more rufescent above than the other Peruvian examples of *notata*. Two females from the lower Río Oyacachi show a tendency toward *notata* in the slightly more olivaceous tone of the upper parts but they are still clearly referable to *aequatorialis*. A young male from Puerto Indiana, Peru, at the mouth of the Napo, might possibly belong here also, but it seems to show better affinities to *fuscicauda* from the opposite bank of the Amazon, and I have referred it to that form for the present. Females from that region will be needed to decide the question.

SPECIMENS EXAMINED.—See under *C. n. fuscicauda*.

Schistocichla schistacea (Sclater)

Hypocnemis schistacea SCLATER, 1858, P. Z. S. London, XXVI, p. 252—Río Javarri, northeastern Peru; ♂; British Museum.

The discovery, among the Peruvian material, of a female of *S. leucostigma subplumbea*, once considered to be a subspecies of the present form, from Orosa whence there are two females of unquestioned *schistacea* also present, and the finding of a male of *schistacea* from Apiyacu, on the north bank of the Amazon not far from Puerto Indiana whence there are undoubted specimens of *subplumbea*, has raised considerable doubt as to the specific unity of these two forms. An additional male from Sarayacu, lower Ucayali, has made the series of *schistacea* complete enough to permit a careful study of the relationship of that form with *subplumbea* and its allies which has resulted in the conclusion that two species are, after

all, to be recognized. The females are, as is now known, quite different in the coloration of the upper parts and the wings, though the under surface is strikingly similar. Above, however, *schistacea* females have the head quite rufescent with strongly marked shaft-lines of pale cinnamomeous, while the upper mantle has similarly obvious pale shaft-lines, and the side of the head, including a narrow line above the eye, is brighter than the crown though deeper than the breast. The shafts of the entire plumage tend to be pronounced in both sexes. The male is colored almost exactly like that of *S. leucostigma intensa* (*S. subplumbea intensa* and *S. schistacea intensa* auctorum) though a little darker below, but there is a bluish sheen to the feathers that is lacking in *intensa*, and the plumage is somewhat more compact. Further than this, in both sexes the bill of *schistacea* is shorter and more slender, with a straighter culmen and with the nostrils nearer the tip; the nostrils themselves are rounder, less elongate, and with a slightly more appreciable space between the hinder margin and the first feathering. In the male, the bill is solidly black. The feet are smaller, with shorter claws. At the carpal edge of the wing, the pale spots on the upper wing-coverts (white in the male, pale rufous in the female), which are more or less reduced in *intensa*, are here enlarged and elongated sufficiently to make a noticeable broad stripe. Feet black in both sexes.

Under other circumstances, these characters are no more than might be considered of subspecific value. A female of *S. l. rufifacies* has a pale rufescent line around the eye and the feathers of the forehead and anterior auriculars have rather prominent shafts and are tinged with ochraceous, while the wings are dark, the flanks are shaded with dark olive, and the upper tail-coverts are darker than the back. In all these particulars, there is a tendency toward the characters of *schistacea*. A female *S. l. saturata* similarly has prominent shafts on the top of the head and auriculars (though these areas are gray) and the flanks are very similar in coloration to those of *schistacea*, while the feet are equally blackish and the bill equally dark. In these ways there are shown certain similarities which may be useful in suggesting a relatively recent common origin if they do not signify a parallelism in development. Nevertheless, the most nearly unbroken line of present-day relationship connects the *leucostigma* and *subplumbea* groups and leaves *schistacea* as an apparently closely related but specifically distinct form which occurs at certain places together with members of the larger group.

SPECIMENS EXAMINED.—See under *S. leucostigma brunneiceps*.

Schistocichla leucostigma subplumbea (Sclater and Salvin)

Dysithamnus subplumbeus Sclater and Salvin, 1880, P. Z. S. London, p. 158—Sarayacu, Ecuador; British Museum.

A series from Pomará, south bank of the Río Marañón, Río Seco, west of Moyobamba (also south of the Marañón), Huarandosa, Río Chinchipe, and Puerto Indiana, mouth of the Napo, present fairly uniform characteristics of *subplumbea*. This is not surprising in view of the affinity, which is becoming increasingly evident, between eastern Ecuador and the Chinchipe-Pomará region of Peru. The surprising discovery is that a female from Orosa, south bank of the Amazon, opposite a point below the mouth of the Napo, belongs to this same form and not to *intensa* which inhabits the upper Ucayali (including Chanchamayo) and upper Huallaga valleys but evidently does not descend either of them any great distance. The Amazon apparently is not a distributional barrier in the case of this form, which crosses the river at this point as does *S. schistacea*.

There is considerable variation in the depth of the rufous coloration on the under parts of the females and some also in the coloration of the upper parts, but the series remains distinct from *intensa* by being less blackish on the head and less deeply rufescent on the back. The males are paler gray throughout.

In view of this demonstrated distribution, I am inclined to place Bartlett's Xeveros specimen (Sclater, 1890, 'Cat. Birds Brit. Mus.,' XV, p. 276, Spec. k) in the present form. Iquitos birds unquestionably belong here.

Specimens Examined.—See under *S. l. brunneiceps*.

Schistocichla leucostigma intensa (Zimmer)

Myrmeciza schistacea intensa Zimmer, 1927, Proc. Biol. Soc. Wash., XL, p. 208—Huachipa (junction of the Chinchao and Huallaga rivers), Peru; ♀; Field Museum of Natural History.

Specimens from Santa Rosa, upper Ucayali, and Tulumayo, Junín, are referable to the dark-backed, blackish-headed subspecies of the upper Huallaga. The Junín examples have been recorded before in the original description; the occurrence of the subspecies on the main stream of the Ucayali has not been noted heretofore. Apparently the bird does not descend the stream since it has not been found at Sarayacu, while at Orosa, on the Amazon below Iquitos, the allied subspecies *subplumbea* represents it.

Specimens Examined.—See under *S. l. brunneiceps*.

Schistocichla leucostigma brunneiceps, new subspecies

TYPE from Chaquimayo, Andes of Carabaya, southeastern Peru; altitude 3000 feet. No. 16,349, Zoologische Staatssammlung, Munich. Adult male collected July 7, 1910, by H. and C. Watkins. Original number 273.

DIAGNOSIS.—Intermediate between *S. l. humaythae* from the left bank of the lower Rio Madeira, Brazil, and *S. l. intensa* from eastern Peru. Female darker than *humaythae* and paler than *intensa*, with the top and sides of the head washed with brown, not sharply defined from the back as in *intensa*. Males nearest to *intensa;* darker than *humaythae*. Feet and bill apparently intermediate in color, darker than in *humaythae* but somewhat paler than in *intensa*.

RANGE.—Carabaya district of southeastern Peru. Known from Chaquimayo, La Pampa, and Marcapata.

DESCRIPTION OF TYPE.—Back Prouts Brown; top of head Mummy Brown, not sharply defined from the back; sides of head dark Dresden Brown. Under parts largely Amber Brown; throat a little paler; sides of breast darker, merging into the color of the back; flanks and under tail-coverts Brussels Brown x Raw Umber; under wing-coverts Sudan Brown; under wing-coverts and remiges dark Natal Brown, the coverts with a terminal spot of tawny. Retrices dusky Neutral Gray with faintly browner edges. Wing, 71 mm.; tail, 56; exposed culmen 18; culmen from base, 21½; tarsus, 27.

REMARKS.—The male is not fully grown but has acquired enough of the adult plumage to show the probable characters of this sex. The crown is Dark Neutral Gray, the back Deep Neutral Gray. Throat Neutral Gray (with a tinge of Mouse Gray due to immaturity); breast between Neutral and Deep Neutral Gray; belly similar with some narrow tips of white; flanks like breast (with some deep rufous feathers of immaturity still persisting). Remiges and upper wing-coverts blackish (immature feathers fuscous), coverts with terminal spots of white (some buffy). Tail sooty blackish. Maxilla blackish; mandible dusky but with an irregular area on lower portion somewhat whitish; feet dark brown (in dried skin). Wing, 67 mm.; tail, 52½; exposed culmen, 17¼; culmen from base, 22; tarsus, 27.

The existence of this subspecies has long been known but the absence of males in adult plumage has prevented the accurate study of the relationships of the form in question. The material at hand has now made this study possible.

It is evident from the characters given above that the form here described is intermediate between *S. l. humaythae* from the left bank of the Rio Madeira (and the upper regions on the right bank: Alliança, etc.) and the bird I described as *Myrmeciza schistacea intensa.* The supposed specific affinity of *schistacea* and *subplumbea* and the discovery of both *schistacea* and a member of the *leucostigma* group at Tonantins by Mr. Todd (1927, Proc. Biol. Soc. Wash., XL, p. 166) has led to the

assumption that *subplumbea* and *leucostigma* must be specifically distinct [Hellmayr, 1929, Journ. Orn., LXXVII, (2), Festschrift, p. 59]. However, both *schistacea* and a member of the *subplumbea* group (*intensa*) are now known to occur together in northern Peru as I have shown above in the discussion of *schistacea*, so that, with *schistacea* thus necessarily removed from the *subplumbea* group, the apparent conflict in the ranges of *leucostigma* and *subplumbea* is now removed. The intermediacy shown by the present new form is sufficient evidence that *subplumbea* must be reduced to a secondary place under the older name *leucostigma*.

In the matter of the color of the feet in *humaythae*, although the fact is not mentioned in published accounts, all our specimens show the feet to be distinctly browner and darker than in *rufifacies*, though not so blackish as in *subplumbea*, *intensa*, and *saturata; infuscata*, which I have not seen, is said to have the light feet of *leucostigma* but our two skins of *leucostigma* have the feet darker than in *rufifacies*. The new form described herewith has the feet darker than *humaythae* but paler than *infuscata*, as mentioned in the diagnosis.

SPECIMENS EXAMINED

S. l. leucostigma.—BRITISH GUIANA: Tumatumari, Potaro River, 2♂, 2♀; Rockstone, Essequibo River, 1♀; Carimang River, 1♂.[1] BRAZIL: Conceição, Rio Branco, 1♀ (?).[1]

S. l. rufifacies.—BRAZIL: Villa Bella Imperatríz, Serra de Parintins, 1♂, 1♀; Urupa, Rio Gy-Paraná, 1♂.

S. l. humaythae.—BRAZIL: Rosarinho, Lago Sampaio, 2♂, 2♀; Rio Picto, 1♂.

S. l. brunneiceps.—PERU: Chaquimayo, Andes of Carabaya, 1♀ (type)[2]; La Pampa, 1♂.

S. l. intensa.—PERU: Tulumayo, Junín, 1♂, 1♀; Santa Rosa, upper Ucayali, 1♂, 2♀; Vista Alegre, 1♂[1]; Huachipa, 2♂, 1♀ (type).[1]

S. l. subplumbea.—COLOMBIA: La Murelia, Caquetá, 1♂, 2♀; Florencia, 2♀. ECUADOR: Río Suno, above Avila, 4♂, 3♀; lower Río Suno, 2♂, 2♀; mouth of Río Curaray, 1♂; below San José, 1♂. PERU: Puerto Indiana, mouth of the Napo, 2♂; Orosa, south bank of Río Amazon, 1♀; Huarandosa, Río Chinchipe, 2♂, 3♀, 1?; Pomará, Río Marañón, 1♂, 1♀; Río Seco, about 30 miles west of Moyobamba, 1♂, 1♀.

S. l. saturata.—VENEZUELA: Arabupu, Roraima, 4200 ft., 1♀.

S. schistacea.—PERU: Sarayacu, Río Ucayali, 1♂; Apiyacu, north bank of Amazon, 1♂; Orosa, south bank of Amazon, 2♀; BRAZIL. São Paulo de Olivença, 3♂, 2♀[3]; Tonantins, 4♂.[3]

Formicarius analis analis D'Orbigny and Lafresnaye)

Myothera analis D'ORBIGNY AND LAFRESNAYE, 1837, Mag. Zool., VII, cl. 2, p. 14—Yuracares and Chiquitos, Bolivia.

[1]Specimens in Field Museum of Natural History, Chicago.
[2]Specimen in Zoologische Staatssammlung, Munich.
[3]Specimens in Carnegie Museum, Pittsburgh.

A female from La Pampa, Río Tavara, Peru, agrees quite closely with nearly topotypical Bolivian specimens and undoubtedly represents typical *analis*. Other specimens from the Ucayali River and the south bank of the Amazon below Iquitos are somewhat less distinctly tinged with rufescence than the skin from La Pampa, though some of them are matched by one of the less rufescent Bolivian birds. A good series from the Rio Madeira in Brazil shows both extremes. All agree in having moderately light-colored mantle and head, pale rufescent crissum and upper tail-coverts, pale belly, and dull breast. For the present, I consider them all as belonging to *F. a. analis*.

SPECIMENS EXAMINED.—See *F. a. olivaceus*.

Formicarius analis zamorae Chapman

Formicarius analis zamorae CHAPMAN, 1923, Amer. Mus. Novit., No. 96, p. 9—Zamora, eastern Ecuador; ♂; Amer. Mus. Nat. Hist.

Birds from Pebas, Puerto Indiana, and Apiyacu, on the north bank of the Amazon, agree quite closely with the type of *zamorae* and a series from the Río Suno, eastern Ecuador. Records from Iquitos doubtless also belong here though I have seen no material from that immediate locality.

Specimens from the Río Chinchipe, north of the Marañón, considerably farther west than Iquitos, appear to be recognizably distinct and to share their characters with the birds from south of the river in the same general longitude, being also distinct from the Ucayali birds. They are accordingly described below.

SPECIMENS EXAMINED.—See under *F. a. olivaceus*.

Formicarius analis olivaceus, new subspecies

TYPE from Huarandosa, valley of the Río Chinchipe, northwestern Peru; elevation 3000 ft. No. 182,045, American Museum of Natural History. Adult male collected September 19, 1923, by Harry Watkins. Original number 7891.

DIAGNOSIS.—Nearest to *F. a. zamorae* from eastern Ecuador and northeastern Peru, north of the Amazon, but differs by having the upper parts darker and more olivaceous, less rufescent; the rump duller, less rufescent; the black of the throat occupying a shorter, more restricted area and deeper, less brownish; the gray of the breast clearer, more of a carbon-gray; belly and flanks grayer, less brownish. Compared with *F. a. analis* of the Rio Madeira and eastern Peru, the upper and under parts are decidedly darker; the rump less rufescent; the rufous of the crissum usually deeper; the black of the throat usually more restricted; the white loral spot averaging distinctly smaller, never as large as in some *analis;* bill shorter, 20¼–23 mm. as against 22–25 in *analis*.

RANGE.—Northwestern Peru in the valleys of the tributaries of the Marañón and the lower Huallaga (Río Chinchipe and Río Mayo); humid tropical zone.

DESCRIPTION OF TYPE.—Top of head basally fuscous black with terminal borders of dark Brownish Olive, lighter on the forehead. Back dark Raw Umber x Medal Bronze, becoming more rufescent posteriorly; rump nearest Raw Umber; upper tail-coverts Argus Brown. Lores and a slight backward extension to the supra-anterior corner of the orbit black with a small triangular spot of white in the middle. Chin, throat and sides of face black; upper posterior auriculars olive grayish. Breast Dark Dull Gray x Neutral Gray, becoming dark olive-brown on sides; flanks Brownish Olive; abdomen Pale Smoke Gray tinged with buff; under tail-coverts bright Hazel. Outer surface of wings like the back except on outer primaries and primary-coverts, which are black, and outer web of alula, which is paler olive. Axillaries and under wing-coverts orange-buff with black tips; inner webs of wings crossed by a band of Cinnamon-Buff. Retrices with terminal half black; basal half faintly tinged with brown. Wing, 95 mm.; tail, 54½; exposed culmen, 17½; culmen from base, 22; tarsus, 31.

REMARKS.—Females similar to the males. Some specimens are distinctly lighter olivaceous above than the type; others have the outer surface of the wings slightly more rufescent than the back; one male from Río Seco has the crissum deeper in coloration while two topotypical females have it somewhat lighter; the belly is pale buffy in a male from the Río Seco; and several skins of both sexes and from both localities show traces of rufescence on the sides of the neck. The diagnostic characters, nevertheless, remain distinctive in the series at hand.

Probably the specimens recorded by various authors from Chyavetas, Xeberos, Shanusi (Yurimaguas), and Huambo belong to this same form.

SPECIMENS EXAMINED

F. a. analis.—BOLIVIA: Yungas, 1 (?); San Antonio, Río Chimoré, 1 ♂; Jatumpampa, 1 ♂; Todos Santos, 1 ♀. BRAZIL: Barão Melgaço, Matto Grosso, 1 ♂; Borba, 3 ♀; Auará, Rio Madeira, 7 ♂, 2 ♀; Rosarinho, 2 ♂, 1 ♀; Villa Bella Imperatríz, 5 ♂, 1 ♀. PERU: Orosa, 1 ♂, 1 ♀; Sarayacu, 1 ♂; Santa Rosa, Ucayali, 1 ♀; Lagarto, 3 ♂, 3 ♀; mouth of Río Urubamba, 2 ♂, 1 ♀; La Pampa, 1 ♀.

F. a. zamorae.—ECUADOR: Zamora, 1 ♂ (type), 1 ♀; mouth of Río Curaray, 3 ♂, 2 ♀; Río Suno above Avila, 3 ♂, 2 ♀; lower Río Suno, 1 ♀; below San José, 3 ♂, 2 ♂. PERU: Pebas, 1 ♂; Puerto Indiana, 1 ♂, 1 ♀; Apiyacu, 3 ♂.

F. a. connectens.—COLOMBIA: Villavicencio, 2 ♂ (including type); La Murelia, 1 ♂, 2 ♀.

F. a. olivaceus.—PERU: Huarandosa, Río Chinchipe, 2 ♂ (including type), 2 ♀; Río Seco, 30 miles west of Moyobamba, 3 ♂, 1 ♀.

Melanopareia maranonica Chapman

Melanopareia maranonicus CHAPMAN, 1924, Amer. Mus. Novit., No. 123, p. 3, July 2—Perico, Río Chinchipe; ♂; Amer. Mus. Nat. Hist.

This very distinct form is, as described, somewhat intermediate between the *elegans* group and the *maximiliani* group, though nearer to

elegans. However, it has certain characters of its own which are not intermediate, the most striking of which is found in the pure white outer margins of the greater and middle upper wing-coverts, and there is no indication of suggested transition in any of the material at hand. Possibly at some future date the diverse members of the genus may be united into a single species with less interruption in the range than is now known, but at present I prefer to recognize three and keep the present form intact.

SPECIMENS EXAMINED.—See under *M. elegans paucalensis*.

Melanopareia elegans paucalensis (Taczanowski)

Synallaxis paucalensis TACZANOWSKI, 1884, 'Orn. Pérou,' II, p. 131—Paucal; collection Raimondi (Lima); ♂ (in alcohol).

I am inclined to believe that this subspecies is just recognizable. The black cap of the males seems to be continued farther over the anterior margin of the mantle than in Ecuadorian birds; the black averages grayer, less brownish; the lower breast and belly average lighter Bay or Chestnut, being sometimes distinctly lighter and never as dark as the darkest *elegans;* the black pectoral band averages narrower; and the superciliary line averages less deeply buff. Peruvian females have the top of the head lighter with paler edges and with much less distinct demarcation from the back, sometimes with nearly complete transition.

Certain examples from Puna Island and Chone, Ecuador, are noticeably paler below and on the wing-coverts than typical *elegans* and represent the form described as *speciosa*, if that race is separable; but the females have the top of the head as dark as in typical *elegans* and show no approach toward the characters of *paucalensis*.

SPECIMENS EXAMINED

M. e. elegans.—ECUADOR: Punta Santa Ana, 1♂; Portovelo, 1♂, 1♀; Río Pindo, 2♂, 2♀; Chone, Manavi, 2♀; Isla de Puna (? = *speciosa*), 2♂, 1♀.

M. e. paucalensis.—PERU: Palambla, Piura, 5♂, 2♀; Trujillo, 2♂, 2♀.

M. maranonica.—PERU: Perico, Río Chinchipe, 4♂ (incl. type), 2♀; Jaen, Marañón Valley, 1♂.